Calendar No. 485

97TH CONGRESS
2d Session

SENATE

REPORT
No. 97-335

TECHNICAL INFORMATION CLEARINGHOUSE FUND ACT OF 1982

APRIL 20 (legislative day, APRIL 13), 1982.—Ordered to be printed

Mr. PACKWOOD, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany S. 2272]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 2272) to enhance the transfer of technical information to industry, business, and the general public by amending the Act of September 9, 1950 (15 U.S.C. 1151 et seq.) to establish a Technical Information Clearinghouse Fund, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

PURPOSE

The purposes of the bill are to establish a Technical Information Clearinghouse Fund (Fund) for use as a revolving fund for payment of all costs of conducting clearinghouse activities of the National Technical Information Service and to authorize a one-time appropriation not to exceed $5 million for working capital for the Fund.

BACKGROUND AND NEED

The National Technical Information Service (NTIS) is the central source for the public sale of research, development and engineering reports and other analyses prepared by Federal agencies, their contractors and grantees, and selected non-Federal entities. NTIS sells its products and services on a self-sustaining basis. Gross sales in fiscal year 1983 are expected to be about $27 million.

NTIS presently uses a trust fund to finance its operations. A trust fund has not proven to be adequate because it does not provide working capital to finance operations during low cash-flow periods and it

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does not permit net earnings to be retained to develop working capital or to purchase capital assets.

NTIS experiences broad fluctuations in cash-flow and no reservoir or working capital exists to finance operations during times of low cash inflow. As a result NTIS must draw upon funds advanced by customers (deposit accounts) to help finance operations during these low cash-flow periods.

The Department of Commerce, the Office of Management and Budget and the General Accounting Office all agree that this practice is undesirable and should be eliminated through the establishment of a revolving fund which would receive a one-time appropriation for working capital to finance inventories and provide support during low cash periods. S. 2272 would authorize a one-time appropriation of up to $5 million to provide a corpus for the fund.

This corpus can be thought of as a line of credit. During low cash-flow periods, NTIS would draw upon this caiptal to finance operations. During high cash-flow periods, this capital would be replenished from revenues.

The establishment of a revolving fund also will allow NTIS to modernize its financial practices, assist in matching costs with revenues, allow for more accurate representation of NTIS' overall financial status and generally improve management control over operations.

On February 26, 1982 the Secretary of Commerce transmitted to Congress draft legislation to establish a revolving fund to be used by the Secretary of Commerce to carry out all activities of NTIS. This revolving fund will utilize a cost accounting system similar to the system used by private companies. All NTIS expenses would be paid from the fund, and the fund would be reimbursed from sales receipts or appropriated funds.

At the end of each fiscal year, the Secretary of Commerce shall transfer to the general fund of the Treasury any amount in the fund which, in his/her judgment, exceeds present and reasonable future requirements of the fund.

COMMITTEE RECOMMENDATIONS

The Committee believes that the administration's request to establish the Technical Information Clearinghouse Fund and to authorize $5 million as a corpus for the Fund is justified. The Committee reports favorably S. 2272.

LEGISLATIVE HISTORY

A draft bill to establish a Technical Information Clearinghouse Fund, was transmitted to the Congress by the Secretary of Commerce on February 26, 1982. A hearing was held on March 17, 1982 by the Subcommittee on Science, Technology, and Space. On March 24, 1982, S. 2272, identical to the administration's draft, was introduced at the request of the administration by Senator Packwood. On March 29, 1982, the Committee on Commerce, Science, and Transportation considered and ordered to be reported S. 2272.

Estimated Costs

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. Congress,
Congressional Budget Office,
Washington, D.C., April 2, 1982.

Hon. Bob Packwood,
Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate, Washington, D.C.

Dear Mr. Chairman: Pursuant to Section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has reviewed S. 2272, the Technical Information Clearinghouse Fund Act of 1982, as ordered reported by the Senate Committee on Commerce, Science, and Transportation, March 29, 1982.

This bill would establish a permanent revolving fund for the National Technical Information Service (NTIS), which collects and distributes scientific and business information generated by the federal government, and promotes and licenses government-owned inventions. S. 2272 authorizes a one-time appropriation of $5 million in 1983 to establish the revolving fund, which would replace the current practice of using trust, reimbursable, and consolidated working funds at NTIS. The revolving fund would allow NTIS to retain net earnings, thus allowing for replacement of capital equipment as well as allowing the fund to finance operations in the event of cash flow lags. Since the fund would be self-sufficient, with reimbursements covering expenses, it is expected that no net outlays would result from obligation of the $5 million.

Should the Committee so desire, we would be pleased to provide further details on this estimate.

Sincerely,

Alice M. Rivlin, *Director.*

Regulatory Impact

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation:

The bill, S. 2272, establishes a Technical Information Clearinghouse Fund and authorizes an appropriation of up to $5,000,000 as a corpus for the Fund.

The bill does not regulate private business activity, or any private activity. The Committee concludes, therefore, that the implementation of this bill will have no impact on the personal privacy of any individual or business. No records will be required to be kept by any individual or business, nor will any reports need to be filed as a result of S. 2272 becoming law.

Section-by-Section Analysis

Section 1 specifies that the act may be cited as the "Technical Information Clearinghouse Fund Act of 1982".

Section 2 adds a new section 8 to the act of September 9, 1950 (the clearinghouse statute). New subsection 8(a) establishes the Technical Information Clearinghouse Fund (hereinafter "Fund") as a revolving fund in the Treasury of the United States, for use by the Secretary of Commerce, without fiscal year limitation, to carry out the activities authorized in the act of September 9, 1950, and any other activities assigned by the Secretary to the clearinghouse.

New subsection 8(b) authorizes inclusion of the following in the Fund: all fees, advances, and reimbursements received from any source for products and services furnished, or to be furnished, by the clearinghouse; all receivables, inventories, and other assets used in conducting clearinghouse activities at the time of the Fund's establishment or subsequently thereto; all receipts from the sale or exchange of property used by the clearinghouse and all receipts in payment for loss or damage to such property; and any sums appropriated for clearinghouse activities.

New subsection 8(c) authorizes the Secretary of Commerce to use the Fund to pay all costs of conducting clearinghouse activities, including the payment of any financial obligations related to clearinghouse activities which were undertaken prior to the Fund's establishment or subsequently transferred to the Fund by law or in conjunction with any reorganization authorized by law.

New subsection 8(d) authorizes refunds from the Fund of fees paid by mistake or in excess of that required.

New subsection 8(e) requires the Secretary to transfer to the general fund of the Treasury at the close of each fiscal year any amount in the Fund that exceeds any present and reasonable future requirements of the Fund. Unlike the present law, monies can be retained to restore any impairment of the Fund. Replacement costs of equipment and inventories in most instances are higher than original purchase costs. By permitting funds to be retained to cover current and reasonable future needs, if products and services are appropriately priced, the need for appropriations to make up the difference between replacement and original costs would be avoided. Instead of the general taxpayer, the users of NTIS services and products would shoulder the burden of increased replacement costs.

New subsection 8(f) defines "costs" to include direct expenses and charges for indirect and administrative expenses, including: accrued annual leave; uncollectible accounts; cost of sales; developmental costs; inventory obsolescence; depreciation of equipment to provide funds to replace capital assets; and financial obligations undertaken prior to the Fund's establishment or transferred to the Fund thereafter.

The broad definition of the term "costs" is consistent with the thrust of the policy established by the Congress with respect to recovering the costs of clearinghouse activities from users when it enacted section 3 of the Act of September 9, 1950 (15 U.S.C. 1153) and section 2 of the Act of September 26, 1970 (15 U.S.C. 1526). That is, clearinghouse publications and services should be provided without causing

any expense to the taxpayer by way of appropriations. (S. Rep. No. 537, 91st Cong., 1st Sess. (1969)). To accomplish this, users must be charged their fair share of all costs including those of acquiring and replacing inventories and equipment.

Section 3 authorizes appropriations of not to exceed $5 million to the Secretary of Commerce to provide working capital for the Fund.

Section 4 of the bill amends section 3 of the Act of September 9, 1950 (15 U.S.C. 1153) to require that schedules of fees promulgated by the Secretary of Commerce for activities of the clearinghouse reflect, to the fullest extent feasible, the costs of the products and services offered.

Section 5 provides that the bill shall take effect on the first day of the first fiscal year which begins after the date of enactment.

Changes in Existing Law

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

THE ACT OF SEPTEMBER 9, 1950

Section 3 of the Act

Sec. 3. The Secretary is authorized to make, amend, and rescind such orders, rules, and regulations as he may deem necessary to carry out the provisions of this Act, and to establish, from time to time, a schedule or schedules of reasonable fees or charges for services performed or for documents or other publications furnished under this Act. *Such schedule or schedules of fees or charges, to the fullest extent feasible, shall reflect the costs of the products and services offered.* It is the policy of this Act, to the fullest extent feasible and consistent with the objectives of this Act, that each of the services and functions provided herein shall be self-sustaining or self-liquidating and that the general public shall not bear the cost of publications and other services which are for the special use and benefit of private groups and individuals; but nothing herein shall be construed to require the levying of fees or charges for services performed or publications furnished to any agency or instrumentality of the Federal Government, or for publications which are distributed pursuant to reciprocal arrangements for the exchange of information or which are otherwise issued primarily for the general benefit of the public.

Section 7 of That Act

Sec. 7. * * *

TECHNICAL INFORMATION CLEARINGHOUSE FUND

Sec. 8. (a) There is established in the Treasury of the United States the Technical Information Clearinghouse Fund (hereinafter in this section referred to as "the Fund"). The Fund shall be available to the Secretary of Commerce, without fiscal year limitation, for use as a

revolving fund to carry out the activities authorized in this Act and any other activities lawfully assigned by the Secretary to the clearinghouse established under section 2 of this Act.

(b) There shall be deposited or included in the Fund—

(1) all fees, advances, and reimbursements received from any source for products and services furnished, or to be furnished, by the clearinghouse;

(2) all receipts from the sale, rental, or exchange of property used by the clearinghouse and all receipts in payment of any loss or damage to such property;

(3) all receivables, inventories and other assets associated with such clearinghouse activities; and

(4) any sums appropriated by law for the conduct of such clearinghouse activities.

(c) The Fund shall be available to the Secretary for the payment of all costs of conducting such clearinghouse activities, including the payment of any financial obligations related to such activities which were undertaken by the Secretary before the establishment of the Fund or which are subsequently transferred to the Fund by law or in conjunction with any reorganization authorized by law.

(d) The Secretary may refund from the Fund any fee paid by mistake or in excess of that required.

(e) At the end of each fiscal year, the Secretary shall transfer to the general fund of the Treasury any amount in the Fund which exceeds present and reasonable future requirements of the Fund, as the Secretary shall determine.

(f) As used in this Act, the term "cost" or "costs" shall be construed to include all directly related expenses and appropriate charges for indirect and administrative expenses, including: accrued leave; uncollectible accounts; cost of sales; developmental costs; depreciation; inventory obsolescence; and financial obligations related to such clearinghouse activities undertaken before the establishment of the Fund or subsequently transferred to the Fund by law or in conjunction with any reorganization authorized by law.

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Calendar No. 486

97TH CONGRESS
2d Session

SENATE

REPORT
No. 97-336

EARTHQUAKE HAZARDS REDUCTION ACT OF 1977 AUTHORIZATION

APRIL 20 (legislative day, APRIL 13), 1982.—Ordered to be printed

Mr. PACKWOOD, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany S. 2273]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 2273) to amend section 7 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706) to extend authorizations for appropriations, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

PURPOSE

The purpose of the bill is to authorize appropriations to the Federal Emergency Management Agency, the U.S. Geological Survey, the National Science Foundation, and the National Bureau of Standards to carry out provisions of the Earthquake Hazards Reduction Act of 1977. The bill authorizes appropriations of $3.1 million for fiscal year 1983, to the Federal Emergency Management Agency (FEMA); $30.843 million for fiscal year 1983, to the U.S. Geological Survey (USGS); $25.0 million for fiscal year 1983, to the National Science Foundation (NSF); and $0.475 million for fiscal year 1983, to the National Bureau of Standards (NBS).

BACKGROUND AND NEED

Earthquakes can devastate urban areas, with heavy loss of life and infliction of injury with massive destruction of property. The popular conception that earthquakes in the United States occur predominantly in California is not accurate. Major earthquakes in the United States

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have occurred in all regions and there are 39 States subject to major or moderate seismic risk.

The United States has been fortunate to date. With extensive population growth and settlement in numerous large cities located over seismically active zones, it is only a matter of time before this Nation experiences another damaging event and quite possibly a catastrophic one. In 1981 the U.S. Geological Survey issued a report which stated:

> If an earthquake should occur today on the Newport-Inglewood fault near Los Angeles, it would probably cause losses of about $45 billion to buildings and as many as 23,000 deaths. * * * A repeat of the 1811–12 New Madrid, Mo. earthquake has been estimated to cause [roughly] comparable losses.[1]

In 1977 the Congress responded to the problem posed by earthquakes by enacting the Earthquake Hazards Reduction Act of 1977 to reduce the risks to life and property from future earthquakes. The emphasis of the act is on prevention and preparedness as distinct from disaster relief. To achieve this, the act specifies several objectives: (1) development of an earthquake prediction capability along with an understanding of the economic, legal, political and social implications of such a capability; (2) preparation of model codes for land-use decisions; (3) employment of modern design and construction methods to make new and existing structures earthquake-resistant; (4) education of the public and decisionmakers concerning measures that could be taken to reduce hazards from future earthquakes; and (5) a basic and applied research program to advance the science and engineering aspects of earthquake mitigation.

The act established the National Earthquake Hazards Reduction Program (NEHRP), a multi-agency effort to meet the congressionally mandated objectives. The agencies involved are: FEMA; USGS; NSF; and NBS. The roles and responsibilities of these agencies are as follows:

FEMA has primary responsibility to plan and coordinate the NEHRP; assist States and local governments with Earthquake mitigation and preparedness planning; coordinate Federal activities in response to a declared earthquake disaster or emergency; and, develop improved seismic construction codes, standards and practices for the Federal Government, for States and local governments, and for various elements in the private sector.

USGS conducts and sponsors research on (1) the nature of earthquakes, including the physical processes controlling ground shaking, ground failure, surface faulting, and tectonic deformation; (2) earthquake prediction; and (3) induced seismicity. In addition, USGS delineates and evaluates geologic hazards, prepares seismic risk maps; evaluates earthquake predictions; provides data on earthquakes and related occurrences to all interested parties; and sponsors a program of outreach to Federal, State, and local governments and many elements in the private sector.

NSF sponsors basic and applied research on earthquake processes and phenomena in its geophysics program and on earthquake engi-

[1] Hays, W. W., ed., 1981, Facing Geologic and Hydrologic Hazards: Earth-Science Considerations. U.S. Geological Survey Professional Paper 1240–B, p. B12.

neering and socioeconomic implications of earthquakes in its civil and environmental engineering program. NSF's societal response program supports research on the responses of individuals, organizations, and communities to earthquakes and related hazards.

NBS contributes research on performance criteria and supporting measurement technology for earthquake-resistant construction. It also provides technical assistance to other organizations in the development of design and construction provisions to reduce earthquake hazards in new and existing buildings.

The funding history by agency is provided in table 1. Table 2 provides the breakdown of the fiscal year 1983 budget request by agency effort.

TABLE 1.—COMPARISON OF AGENCY EARTHQUAKE HAZARDS REDUCTION EXPENDITURES FOR FISCAL YEARS 1978 THROUGH 1982

[In millions]

Agency	1978	1979	1980	1981	1982
FEMA			1.2	1.5	1.1
USGS	28.2	31.4	32.0	32.3	32.7
NSF	23.0	22.9	24.8	25.1	25.2
NBS		.4	.4	.4	.475
Total	51.2	54.7	58.4	59.3	59.475

TABLE 2.—BREAKDOWN OF FISCAL YEAR 1983 BUDGET REQUEST ACTIVITY AND AGENCY EFFORT

[In millions]

	FEMA	USGS [1]	NSF	NBS	Total
Earthquake strong motion program		1.2			1.2
Fundamental studies and data management		3.4	7.7		11.1
Hazard warning		.1			.1
Prediction		14.6			14.6
Induced seismicity		1.2			1.2
Hazard assessment		10.3			10.3
Engineering			14.8	0.475	15.275
Research for utilization			2.5		2.5
Preparedness and applications activity	3.1				3.1
Total	3.1	30.843	25.0	.475	59.418

[1] USGS requests rounded to nearest 10th of a million dollars. Total USGS request for fiscal year 1983 is $30,843,000.

COMMITTEE VIEWS

The Committee has reported a bill to authorize funds totalling $59.418 million for NEHRP for fiscal year 1983. This is the amount requested by the administration. The Committee supports the need to reduce Federal spending. Therefore the Committee has examined the NEHRP to determine how—at the requested funding level—it can best: generate the scientific knowledge required; influence States, local governments and private sector elements; protect the public and facilities of various types from earthquakes; and, encourage development of useful disaster response plans following an earthquake.

The Committee has received valuable information on NEHRP from nine witnesses at a Joint Senate Commerce, Science, and Transportation Committee—House Science and Technology Committee

hearing on March 11, 1982, from contacts with many people from a broad spectrum of non-Federal public and private organizations, and from agency briefings for Committee staff.

The Committee recognizes that significant accomplishments have been made since the passage of the act in 1977. Much has been learned in the areas of geophysics and earth sciences from research supported by USGS and NSF.

The Committee however is concerned about three aspects of the NEHRP:

The leadership and organizational arrangements for coordinated Federal action;

The limited progress towards mitigating or minimizing the impacts of earthquakes in almost all of the areas of high seismic risk in the United States; and

The lack of a definite goal or target for a prototype prediction system.

LEADERSHIP AND ORGANIZATION

A number of conditions concern the Committee about the leadership and organization of the NEHRP and the role of FEMA which has been designated as the agency with the primary responsibility to plan and coordinate the NEHRP.

The Congress directed that a written program plan for the NEHRP be developed and submitted to Congress by September 30, 1981. The plan has not been submitted.

There is a widespread perception—within and outside the Federal Government—that earthquake activities in FEMA have low priority for personnel slots and for funds. FEMA has devoted few resources and what appears to be an insufficient number of professional personnel to this area. Furthermore, FEMA cut its funding support to NEHRP nearly in half in response to the second Joint Resolution providing for Appropriations for fiscal year 1982.

The Interagency Committee on Seismic Safety in Construction (ICSSC), established to improve Federal sector building practices, seems to have made little progress in fiscal year 1982. Only 2 of the 10 subcommittees and 2 task forces were reported to have substantial accomplishments.

The Congress has seen little cohesion among the four agencies. There are few signs of the four agencies working together to conduct joint projects, to prepare compatible budgets or to develop coordinated plans.

The Committee wonders whether FEMA, with fiscal year 1982 earthquake mitigation expenditures of $1.1 million and a fiscal year 1983 request of $3.1 million can effectively be the lead agency when other agencies have programs so much larger (NSF fiscal year 1983 request of $25 million; USGS fiscal year 1983 request of $30.8 million).

The Committee requests that the NEHRP or the administration conduct an intensive review, preferably under independent leadership, to determine the best way to manage, structure, and staff the NEHRP to achieve the objectives of the Earthquake Hazards Reduction Act of 1977 and to overcome the problems raised above. The review needs to be completed in time for consideration before the submission of the fiscal year 1984 Executive Budget. The Committee will also request

an independent examination by the General Accounting Office of the existing leadership structure.

MITIGATING THE EFFECTS OF EARTHQUAKE

The Committee agrees with witnesses at the March 11 hearing that more attention needs to be devoted to mitigating the effects of earthquakes—to getting States, local governments, various private sector elements and the Federal Government to take remedial steps and to use existing knowledge and techniques to minimize the hazards of an earthquake. The Committee is concerned that FEMA is giving a disproportionate amount of attention to the post-earthquake response phase and not enough to mitigation.

The Committee feels that the research programs in NSF and in USGS have developed considerably more technical and scientific knowledge than is being utilized.

The Committee expects the forthcoming NEHRP plan to include a strategy and specific actions to increase the utilization of research derived knowledge. There are a number of mechanisms such as model codes, best practices manuals and educational materials specifically targeted for various professional groups as well as for States and local governments, and clearinghouses and workshops. The NSF, FEMA and NBS need to give particular attention to research utilization and should include their activities and fiscal year 1983 plans in the calendar year 1982 Report to Congress.

Another aspect of mitigation that the Committee wants to see emphasized is research and research utilization to provide practical, operational procedures to determine the vulnerability of existing structures to earthquakes and ways to reduce these hazards. This probably means a large number of project-oriented activities to develop, test, synthesize, and demonstrate the efficiency and cost-effectiveness of specific hazard mitigation techniques.

PROTOTYPE EARTHQUAKE PREDICTION CAPABILITY

The Committee is concerned that the United States is still far from having an earthquake prediction capability comparable to ones that exist elsewhere in the world.

The Committee believes that the Congress and the administration need to make a definite commitment to a prototype prediction system in one or more high risk areas by fiscal year 1988. Such a system could provide short-term warnings of an impending earthquake, save innumerable lives, reduce injuries, and possibly reduce substantially the property damages from a major earthquake. Setting a goal of fiscal year 1988 should assist the research community, states, and the Federal agencies (particularly USGS, NSE, and FEMA) in coordinating and focusing many of their applied research, engineering and disaster mitigation activities.

From such a prototype development experience, the Federal government, the States and the private sector would gain invaluable knowledge to help develop operational systems.

Although the USGS has the lead for prediction research and the issuance of earthquake predictions, NSF and FEMA will have to be

active partners—along with State(s) in the specific region selected—in the development of the prototype system.

The Committee requests that the NEHRP include in the 1982 Report to Congress a detailed program plan for the short-term research, engineering studies, technical assistance, instrumentation, and other key pacing items which need to be completed in time to have a prototype prediction system by fiscal year 1988. The plan should identify specific activities for each of the agencies and the State government(s), the cost estimates, and the mechanism to insure coordination and implementation of the plans.

Legislative History

S. 2273 was introduced at the request of the administration by Senator Schmitt with Senator Packwood on March 24, 1982. A hearing was held on March 11, 1982 by the Subcommittee on Science, Technology, and Space. On March 29, 1982 the Committee on Commerce, Science, and Transportation considered and ordered to be reported S. 2273. The administration requested authorization for "such sums as are necessary" for fiscal year 1984. The Committee has recommended authorizing the program for only 1 year.

Estimated Costs

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. Congress,
Congressional Budget Office,
Washington, D.C., April 2, 1982.

Hon. Bob Packwood,
Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate, Dirksen Senate Office Building, Washington, D.C.

Dear Mr. Chairman: Pursuant to Section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has prepared the attached cost estimate for S. 2273, a bill to amend section 7 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706) to extend authorizations for appropriations, and for other purposes.

Should the Committee so desire, we would be pleased to provide further details on this estimate.

Sincerely,

Alice M. Rivlin,
Director.

Congressional Budget Office—Cost Estimate

1. Bill number: S. 2273.
2. Bill title: To amend section 7 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706) to extend authorizations for appropriations, and for other purposes.
3. Bill status: As ordered reported by the Senate Committee on Commerce, Science, and Transportation, March 29, 1982.

4. Bill purpose: This bill authorizes appropriations for fiscal year 1983 of not more than $3.1 million for the Federal Emergency Management Agency (FEMA), approximately $30.8 million for the U.S. Geological Service (USGS), $25 million for the National Science Foundation (NSF), and approximately $0.5 million for the National Bureau of Standards (NBS) for research and activities aimed at understanding earthquakes and mitigating the associated risks to life and property.

5. Cost estimate:

[By fiscal years, in millions of dollars]

	1983	1984	1985	1986	1987
Authorization level:					
FEMA (Function 450)	3.1				
USGS (Function 300)	30.8				
NSF (Function 250)	25.0				
NBS (Function 450)	.5				
Total	59.4				
Estimated outlays:					
FEMA (Function 450)	1.9	0.9	0.3		
USGS (Function 300)	26.2	4.0	.6		
NSF (Function 250)	7.7	12.8	4.5		
NBS (Function 450)	.3	.2			
Total	36.1	17.9	5.4		

6. Basis of estimate: It is assumed for this estimate that all funds authorized will be appropriated by the beginning of fiscal year 1983. The estimate of annual outlays is based upon recent historical spending patterns and information provided by the agencies.

7. Estimate comparison: None.

8. Previous CBO estimate: None.

9. Estimate prepared by: Linwood T. Lloyd.

10. Estimate approved by:

C. G. Nuckols
(James L. Blum,
Assistant Director for Budget Analysis).

Regulatory Impact Statement

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation:

The bill provides authorization of appropriations to implement the provisions of the Earthquake Hazards Reduction Act of 1977 for fiscal year 1983.

The bill does not regulate private business activity, or any private activity. The Committee concludes, therefore, that the implementation of this bill will have no impact on the personal privacy of any individual business. No records will be required to be kept by any individual or business, nor will any reports need to be filed as a result of this bill becoming law.

Section-by-Section Analysis

The bill contains four sections. Section 1 authorizes $3.1 million for the Federal Emergency Management Agency in fiscal year 1983. Section 2 authorizes $30.843 million for U.S. Geological Survey in fiscal year 1983. Section 3 authorizes $25.0 million for the National Science Foundation in fiscal year 1983. Section 4 authorizes $0.475 million for the National Bureau of Standards for fiscal year 1983.

Changes in Existing Law

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

THE EARTHQUAKE HAZARDS REDUCTION ACT OF 1977

Section 7 of That Act

Sec. 7. Authorization of Appropriations.

(a) General. (1) * * *

(2) * * *

(3) There are authorized to be appropriated to the Director for the fiscal year ending September 30, 1982, $2,000,000 to carry out the provisions of sections 5 and 6 of this Act *; and for the fiscal year ending September 30, 1983, $3,100,000 to carry out the purposes of this Act.*

(b) Geological Survey. There are authorized to be appropriated to the Secretary of the Interior for purposes for carrying out, through the Director of the United States Geological Survey, the responsibilities that may be assigned to the Director under this Act not to exceed $27,500,000 for the fiscal year ending September 30, 1978; not to exceed $35,000,000 for the fiscal year ending September 30, 1979; not to exceed $40,000,000 for the fiscal year ending September 30, 1980; $26,600,000 for the fiscal year ending September 30, 1981; [and] $34,425,000 for the fiscal year ending September 30, 1982 *; and $30,843,000 for the fiscal year ending September 30, 1983.*

(c) National Science Foundation. To enable the Foundation to carry out responsibilities that may be assigned to it under this Act, there are authorized to be appropriated to the Foundation not to exceed $27,500,000 for the fiscal year ending September 30, 1978; not to exceed $35,000,000 for the fiscal year ending September 30, 1979; not to exceed $40,000,000 for the fiscal year ending September 30, 1980; $26,600,000 for the fiscal year ending September 30, 1981; [and] $27,150,000 for the fiscal year ending September 30, 1982 *; and $25,000,000 for the fiscal year ending September 30, 1983.*

(d) National Bureau of Standards. To enable the Bureau to carry out responsibilities that may be assigned to it under this Act, there are authorized to be appropriated $425,000 for the fiscal year ending September 0, 1981; [and] $425,000 for the fiscal year ending September 30, 1982 *; and $475,000 for the fiscal year ending September 30, 1983.*

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Calendar No. 487

97TH CONGRESS
2d Session

SENATE

REPORT
No. 97-337

NATIONAL BUREAU OF STANDARDS AUTHORIZATION FOR FISCAL YEAR 1983

APRIL 21 (legislative day, APRIL 13), 1982.—Ordered to be printed

Mr. PACKWOOD, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany S. 2271]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 2271) to authorize appropriations to the Secretary of Commerce for the programs of the National Bureau of Standards for fiscal year 1983, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

PURPOSE AND BRIEF DESCRIPTION

The purposes of the bill are to authorize appropriations to the Secretary of Commerce for the programs of the National Bureau of Standards, including certain special statutory programs, and to assist the National Bureau of Standards (NBS) in carrying out its responsibilities. The bill authorizes appropriations of $111.5 million for fiscal year 1983 for the National Bureau of Standards and $1.98 million for the National Technical Information Service for fiscal year 1983.

BACKGROUND AND NEED

The NBS is the Nation's oldest national laboratory and lead agency for measurement science and standards. Its Organic Act of 1901 (Public Law 56–177), as amended in 1950, sets forth the NBS mission as the Nation's central reference laboratory. The NBBS has direct or implied responsibilities under an additional 15 statutes.

The basic mission of NBS is to develop national standards of measurement for use in scientific investigations, engineering, manufacturing and commerce. The NBS is to apply its expertise in science

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and engineering to achieve such national goals as (A) continued economic development and enhanced innovation and productivity in industry and commerce through optimal utilization of labor, energy, and material resources; (B) reasonable and equitable regulatory decisionmaking that achieves legislative goals effectively and efficiently without imposing unnecessary burdens on the economy, on individuals, on public or private organizations, or on State or local governments; (C) equity in commerce through mutual understanding and acceptance of recognized standards; and (D) accuracy and compatibility in scientific communication and technology transfer among industry, government, and academia.

Unlike other Federal laboratories, the NBS is not directly assigned to any single government functional area, such as health, energy, transportation, or environment. Its capabilities are applicable to a wide range of problems and are available for use by essentially any other Federal agency that needs them. NBS receives reimbursement for work conducted for other agencies.

The National Technical Information Service (NTIS) makes technological, scientific, economic and engineering information generated with Federal support accessible to the research community, business, industry, Federal Government, States, local governments, other organizations and to individuals. NTIS has an Information Clearinghouse Program which sells copies of reports and of research project descriptions at sufficient prices to be a self-sustaining program. NTIS has a patent licensing program to encourage licensing of U.S. Government-owned inventions and a technology transfer program to help U.S. firms acquire foreign technology.

National Bureau of Standards

The administration's budget request for NBS for Fiscal Year 1983 totaled $104,362,000. A breakdown of that request is found in table 1.

TABLE 1.—COMPARISON OF FISCAL YEAR 1983 BUDGET REQUEST WITH FISCAL YEAR 1982 FUNDS AVAILABLE FOR NATIONAL BUREAU OF STANDARDS

[Amounts in thousands]

	Fiscal year 1983	Fiscal year 1982
Measurement research and standards	49, 980	51, 622
(1) Physical and chemical measurements and standards	(20, 856)	(19, 459)
(2) Materials and thermodynamic measurements and standards	(19, 016)	(19, 561)
(3) Measurement assurance program	(3, 039)	(2, 789)
(4) Applied measurement program	(7, 069)	(9, 813)
Engineering measurements and standards	32, 872	27, 452
(1) Engineering standards	(1, 848)	(1, 730)
(2) Safety and performance engineering research	(4, 044)	(3, 760)
(3) Technical support to industrial productivity	(18, 388)	(17, 203)
(4) Mathematical sciences	(3, 601)	(3, 368)
(5) Fire science and engineering	(4, 991)	(1, 391)
Computer sciences and technology	0	12, 024
Central technical support	16, 124	21, 952
(1) Maintenance of technical competence	(15, 495)	(21, 357)
(2) Capital transfers and facilities	(629)	(595)
Transfer to working capital fund	5, 386	7, 228
Subtotal, National Bureau of Standards	104, 362	120, 278

The NBS request for fiscal year 1983 represents a decrease of $15.9 million from the fiscal year 1982 appropriations of $120,278.000.

The major decreases from the fiscal year 1982 program are associated with requests to: Cut the Institute for Computer Sciences ($5.1

million cut from fiscal year 1982 level of $12.2 million to fiscal year 1983 level of $7.1 million) and to transfer the Institute to the General Services Administration (GSA); terminate the metals processing program ($3 million in fiscal year 1982); terminate the recycled materials program ($3.1 million in fiscal year 1982); reduce automated manufacturing by $1 million; stretch out the main computer replacement, reducing fiscal year 1983 expenditures to $5.6 million less than in fiscal year 1982; and to reduce the competence building by $1 million to a fiscal year 1983 level of $6.986 million. The major program increase ($3.5 million) is for NBS to fund the fire research activities previously funded by the Federal Emergency Management Agency (FEMA).

In addition to direct appropriations, NBS receives reimbursement for work performed for other Federal agencies and the private sector. Table 2 shows the estimated operating funds from all sources expected for fiscal year 1983. Assuming that ICST is not transferred, the total operating budget for NBS in fiscal year 1983 is expected to be $188.8 million.

TABLE 2.—TOTAL ESTIMATED NBS OPERATING FUNDS IN FISCAL YEAR 1983—ALL SOURCES

[In millions of dollars]

	STRS appropriation	Reimbursements from other Federal agencies and public	Total
Measurement research and standards:			
Physical and chemical measurements and standards	20.9	11.7	32.6
Materials and thermodynamic measurements and standards	19.0	12.4	31.4
Measurement assurance programs	3.0	.2	3.2
Applied measurement programs	7.1	12.5	19.6
Subtotal	50.0	36.8	86.8
Engineering measurements and standards:			
Engineering standards	1.9	.8	2.7
Safety and performance engineering research	4.0	12.9	16.9
Technical support to industrial productivity	18.4	17.5	35.9
Mathematical sciences	3.6	.9	4.5
Fire science and engineering	5.0	2.6	7.6
Subtotal	32.9	34.7	67.6
Computer sciences and technology:			
Governmentwide ADP standards	7.1		7.1
Scientific and technological advisory services		1.0	1.0
Subtotal	7.1	1.0	8.1
Central technical support:			
Maintenance of technical competence	15.5	3.3	18.8
Capital transfer and facilities	6.0		6.0
Subtotal	21.5	3.3	24.8
Nontechnical supporting services for other agencies		1.5	1.5
Total, NBS	111.5	77.3	188.8

National Technical Information Service

The administration has requested an appropriation of $1,980,000 for the operation of NTIS in fiscal year 1983 compared with a fiscal year 1982 funding of $4,772,000. The reductinos are due primarily to a one-time expenditure ($2 million) in fiscal year 1982 to complete take over of the Smithsonian Science Information Exchange and to pay certain termination costs. The administration also proposed a reduction in the

Technology Transfer Program of $0.4 million and a reduction in the Patent Licensing Program of $0.2 million.

The total budget in fiscal year 1983 for NTIS is expected to be $29.4 million with $27.4 million coming from a technical information clearinghouse fund supported by user fees. The administration has requested authorization for a one-time appropriation of $5 million and legislation to establish the Technical Information Clearinghouse Fund—a revolving fund to improve the management of clearinghouse operations. The Committee reported a bill, S. 2272, to establish this fund.

Findings from the hearing

The Committee held a hearing on March 17, 1982. The Director of NBS presented the administration's budget request and described accomplishments of NBS since the last Senate authorization hearing in 1980.

The Committee received testimony from the Chairman of the NBS Statutory Visiting Committee and from the Chairman of the Steering Committee for the National Academy of Sciences Evaluation Panels for NBS. While the research programs were generally highly regarded, concerns were raised by the two witnesses over the administration's proposals to reduce or terminate several programs, as discussed below.

Metal processing

New techniques in the rapid solidification of metals can produce remarkable improvements in strength and resistance to corrosion and oxidation and present excellent opportunities in the future for the U.S. metals industry. The materials science program at NBS is recognized for its excellence. Industry provided $4 million in fiscal year 1982 in the first year of a cooperative effort on metal processing in the materials science program. The administration proposes eliminating federal funding for metal processing in the belief that industry will support the effort entirely. The Visiting Committee and the Evaluation Panels believe the metal processing effort has great potential but believe federal support is needed for 3 to 5 years before it can become fully supported by industry.

Automated manufacturing

The NBS is considered to be in a unique position to provide standards in automated manufacturing. The Visiting Committee and the Evaluation Panels have looked closely at this program, concluding NBS work in developing standards for automated manufacturing can have a large beneficial effect, does not encroach on industry's direct responsibilities, and needs continued support.

Institute for Computer Sciences and Technology (ICST)

The Evaluation Panels consider ICST a leader in many fields and feel that some of the national standards for Automated Data Processing (ADP) might not have been developed without "the leadership and active participation of the ICST in the consensus process of the American National Standards Institute." The administration's proposed cut of 42 percent will have a drastic effect on the technical program of ICST

Scientific computing needs

Both the Visiting Committee and the Evaluation Panels have been sharply critical of the outdated scientific computing capabilities of the NBS and the slow progress of the NBS in up-grading its computing capabilities.

NBS staff resources and the competency program

Both chairmen were strongly supportive of the competency program and urged that it not be cut as proposed by the Administration. The Chairman of the Visiting Committee expressed concern about the cut in employment, from 3,100 in fiscal year 1980 to an anticipated 2,500 in fiscal year 1983.

Equipment needs

Both Chairmen expressed strong concerns about the obsolescence of equipment at NBS. According to the Visiting Committee, the replacement rate is barely one-half that of the normal replacement rate of industrial R&D laboratories. The Evaluation Panels found in fiscal year 1981 that the NBS was investing about 7 percent or less of its appropriations on equipment replacement and felt the figure should be at least 10 percent. Both groups recommended high priority be given to equipment modernization.

COMMITTEE VIEWS AND RECOMMENDATIONS ON THE NATIONAL BUREAU OF STANDARDS

The Committee reported S. 2271, the National Bureau of Standards Authorization Act for fiscal year 1983, on March 29, 1982. The bill authorizes the appropriation of $111.5 million, plus such additional sums as may be necessary for adjustments in salary, pay, retirement, and other employee benefits for NBS. This is $7.1 million more than requested by the administration. This additional funding is required to support the ICST in the NBS. The Committee rejects the administration's request to transfer ICST to the GSA with the fiscal year 1983 budget of $7.1 million to be provided by GSA.

The administration requested a 2-year authorization, with requests for fiscal year 1984 of "such sums as may be necessary." The Committee does not believe an open authorization is justified. S. 2271 provides for authorization only for fiscal year 1983.

The Committee supports the need to reduce Federal spending. Thus, the NBS budget and programs have been examined to determine how they can best develop the national standards for measurement and carry out other mandated NBS activities at the level of support requested by the administration.

In conducting its review of the NBS and in developing views and recommendations, the Committee has been aided by the hearing on March 17, 1982, reports from the NBS Statutory Visiting Committee and from the National Academy of Sciences' Evaluation Panels for the NBS, statements and informal views from many in the private sector, and staff visits to NBS facilities.

Institute for Computer Sciences and Technology

The administration proposed transfer of ICST to the GSA. Testimony and communications to the Committee confirms the judgment

of the Congress as expressed in Public Law 89–306 (Brooks Act) that the Department of Commerce (DOC) is the appropriate federal agency to develop standards and provide scientific and technical services to federal agencies on automated data processing.

The Committee continues to believe that ICST should remain in DOC. Activities to conduct research, to develop policies and standards for the broad field of information processing—including ADP and telecommunications, and to promote and strengthen the competitiveness of the U.S. computer and data processing industries are clearly under the purview of DOC.

The ICST functions mandated under Public Law 89–306—research, standards setting, and technical assistance to Federal agencies—are important since Federal expenditures on ADP are substantial. Executive agencies spent an estimated $6 million in fiscal year 1981 on data processing. The Committee believes that the widespread Federal use of ADP standards—hardware and software—developed by ICST will lead to greater compatibility of equipment and software from different vendors. The greater compatibility should lead to better data processing capability, easier exchange of data among agencies, and more flexibility and lower costs to the Federal government in replacing or upgrading capabilities in the future.

The Committee believes that ICST needs a strong research base to be able to set Federal standards and to participate effectively in national and international standards setting activities. The Committee shares the concern of the Chairman of the NAS Evaluation Panel for ICST on the low expenditures for research in ICST ($0.2 million in fiscal year 1982).

The Committee encourages active ICST participation in non-Federal domestic and international standards-setting activities. The Committee hopes these activities will lead to better standards and greater compatibility between standards for Federal acquisition and standards for use by the non-Federal sectors.

The Committee recognizes the growing ties among the fields of computer and data processing, word processing and telecommunications. The Committee urges the Secretary of Commerce to assure that ICST and the National Telecommunications Information Agency work together to develop standards facilitating compatibility and the most desirable joint development of these closely-related fields.

The Committee questions whether these functions of ICST—mandated by law—can be carried out effectively in light of the proposed 42 percent reduction in the ICST budget. This concern of the Committee leads it to urge that the Bureau examine critically the allocation of burden costs to the Institute. Since such costs at the Bureau are largely attributable to maintenance of costly scientific laboratories and instrumentation, it may be that uniform allocation of those burden costs to the Institute reduces unreasonably the availability of funds appropriated for the activities of the Institute. The proposed relocation to an agency which does not have the scientific and technical base for support of ICST's assigned responsibilities will further reduce its effectiveness.

Metal processing

The Committee agrees with testimony received at the hearing on the need to maintain the metals processing effort. The Committee be-

lieves this effort should be adequately supported in fiscal year 1983, probably at least at the fiscal year 1982 level of $3.0 million, even if it involves reprogramming funds in the Measurement Research and Standards function.

Equipment and instrumentation

The Committee agrees with the chairpersons of the Visiting Committee and of the Evaluation Panels that the equipment replacement rate is too low. A significant part of the funds being authorized need to go to replacing obsolete equipment at a faster rate than in the past. The Committee requests a written plan from NBS on its efforts for fiscal year 1983 and future years to upgrade equipment and instrumentation. A preliminary plan should be submitted by September 30, 1982 and a final plan within 30 days of the enactment of legislation appropriating funds for NBS for fiscal year 1983.

COMMITTEE VIEWS AND RECOMMENDATIONS ON NATIONAL TECHNICAL INFORMATION SERVICE

The Committee recommends approval of the budget at the level requested by the administration. A separate bill, S. 2272, reported by the Committee would establish a revolving fund to facilitate better management of the Technical Information Clearinghouse Activities.

LEGISLATIVE HISTORY

S. 2271, a bill to authorize appropriations to the Secretary of Commerce for activities conducted by the NBS, was introduced by Senator Packwood for himself and Senator Schmitt on March 24, 1982. The bill was identical to a draft submitted by the administration except for the Committee's authorization for the Institute for Computer Sciences and Technology. A hearing was held on March 17, 1982 by the Subcommittee on Science, Technology, and Space. On March 29, the Committee on Commerce, Science, and Transportation considered and ordered to be reported S. 2271.

ESTIMATED COST

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, D.C., April 2, 1982.

Hon. BOB PACKWOOD,
Chairman, Committee on Commerce, Science and Transportation, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Pursuant to Section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has prepared the attached cost estimate for S. 2271, the National Bureau of Standards Authorization Act for Fiscal year 1983.

Should the Committee so desire, we would be pleased to provide further details on this estimate.

Sincerely,

ALICE M. RIVLIN, *Director.*

CONGRESSIONAL BUDGET OFFICE—COST ESTIMATE

1. Bill number: S. 2271.
2. Bill title: National Bureau of Standards Authorization Act for Fiscal Year 1983.
3. Bill status: As ordered reported by the Senate Committee on Commerce, Science and Transportation, March 29, 1982.
4. Bill purpose: S. 2271 authorizes the appropriation of $111.5 million, plus such additional sums as may be necessary for adjustments in salary, pay, retirement and other employee benefits, for the National Bureau of Standards (NBS) in fiscal year 1983. In addition, $2.0 million is authorized to be appropriated in fiscal year 1983 for the National Technical Information Service (NTIS).

Fiscal year 1982 appropriations to date for the activities authorized by the bill are $121.7 million. The President's 1983 budget requests $105.2 million for this purpose, but would transfer the computer science and technology program to the General Services Administration, while S. 2271 requires that this program remain within the jurisdiction of NBS.

5. Cost estimate:

[By fiscal years, in millions of dollars]

	1983	1984	1985	1986	1987
Authorization level:					
Specified	113.5				
Estimated	6.2				
Total	119.7				
Estimated outlays	90.3	25.8	3.6		

The costs of this bill fall within budget subfunction 376.

6. Basis of estimate: For purposes of this estimate, it was assumed that the amounts authorized in the bill for 1983 would be appropriated prior to the beginning of the fiscal year. In addition, authorization for pay and other benefits increases of approximately $6.2 million were estimated based on CBO's current inflators. Outlays reflect historical spending patterns.
7. Estimate comparison: None:
8. Previous CBO estimate: None.
9. Estimate prepared by: Mary B. Maginniss.
10. Estimate approved by:

JAMES L. BLUM,
Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation:

The bill, S. 2271, provides authorization of appropriations to the Secretary of Commerce to carry out programs of NBS, including certain special statutory programs in fiscal year 1983.

The bill does not regulate private business activity, or any private activity. The Committee concludes, therefore, that the implementation of this bill will have no impact on the personal privacy of any individual or business. No records will be required to be kept by any individual or business, nor will any reports need to be filed as a result of S. 2271 becoming law.

SECTION-BY-SECTION ANALYSIS

Section 1

The section indicates that this act may be cited as the "National Bureau of Standards Authorizations Act of Fiscal Year 1983.

Section 2

This section authorizes appropriations to the Department of Commerce of $111.5 millon for fiscal year 1983 for activities pursuant to the act establishing the National Bureau of Standards (15 U.S.C. 271 et seq.).

Section 3

This section authorizes appropriations to the Secretary of Commerce of $1.98 million for activities of the National Technical Information Service.

Section 4

This section provides authorizations for adjustments in salary, pay, retirement, and other employee benefits which may be provided for by law.

Section 5

Appropriations made under authority of this act shall remain available for periods specified in the appropriations act.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee states that the bill as reported will make no change to existing law.

O